

## Complete Summary

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### GUIDELINE TITLE

Laryngeal cancer.

### BIBLIOGRAPHIC SOURCE(S)

Laryngeal cancer. Philadelphia (PA): Intracorp; 2005. Various p. [29 references]

### GUIDELINE STATUS

This is the current release of the guideline.

All Intracorp guidelines are reviewed annually and updated as necessary, but no less frequently than every 2 years. This guideline is effective from July 1, 2005 to July 1, 2007.

## COMPLETE SUMMARY CONTENT

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## SCOPE

### DISEASE/CONDITION(S)

Laryngeal cancer

### GUIDELINE CATEGORY

Diagnosis  
 Evaluation  
 Management  
 Risk Assessment  
 Treatment

### CLINICAL SPECIALTY

Family Practice  
Internal Medicine  
Oncology  
Otolaryngology  
Radiation Oncology  
Surgery

## INTENDED USERS

Allied Health Personnel  
Health Care Providers  
Health Plans  
Hospitals  
Managed Care Organizations  
Utilization Management

## GUIDELINE OBJECTIVE(S)

To present recommendations for the diagnosis, treatment, and management of laryngeal cancer that will assist medical management leaders to make appropriate benefit coverage determinations

## TARGET POPULATION

Individuals with laryngeal cancer

## INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis/Evaluation/Risk Assessment/Prognosis

1. Physical examination and assessment of signs and symptoms
2. Diagnostic tests:
  - Direct laryngoscopy and biopsy
  - Indirect laryngoscopy ("office laryngoscopy")
  - Magnetic resonance imaging (MRI) or computerized tomography (CT) with or without contrast
  - X-rays
  - Modified barium swallow

Management/Treatment

1. Partial laryngectomy with neck node dissection followed by primary radiation therapy
2. Primary radiation alone
3. Supraglottic laryngectomy with neck dissection
4. Supraglottic laryngectomy with postoperative radiation therapy
5. Chemotherapy with radiation
6. Chemotherapy and radiation with total laryngectomy in case of treatment failure
7. Experimental regimens combining chemotherapy (with or without surgery and radiation)

8. Referral to specialists
9. Case management strategies, including case initiation and case management focus

#### MAJOR OUTCOMES CONSIDERED

- Risk factors and five-year survival rates
- Effectiveness of treatment
  - Survival rates
  - Quality of life

### METHODOLOGY

#### METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)  
Hand-searches of Published Literature (Secondary Sources)  
Searches of Electronic Databases

#### DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Searches were performed of the following resources: reviews by independent medical technology assessment vendors (such as the Cochrane Library, HAYES); PubMed; MD Consult; the Centers for Disease Control and Prevention (CDC); the U.S. Food and Drug Administration (FDA); professional society position statements and recommended guidelines; peer reviewed medical and technology publications and journals; medical journals by specialty; National Library of Medicine; Agency for Healthcare Research and Quality; Centers for Medicare and Medicaid Services; and Federal and State Jurisdictional mandates.

#### NUMBER OF SOURCE DOCUMENTS

Not stated

#### METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Not Given)

#### RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not stated

#### METHODS USED TO ANALYZE THE EVIDENCE

Review

#### DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

## METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus (Delphi)

## DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

A draft Clinical Resource Tool (CRT or guideline) is prepared by a primary researcher and presented to the Medical Technology Assessment Committee or the Intracorp Guideline Quality Committee, dependent upon guideline product type.

The Medical Technology Assessment Committee is the governing body for the assessment of emerging and evolving technology. This Committee is comprised of a Medical Technology Assessment Medical Director, the Benefit and Coverage Medical Director, CIGNA Pharmacy, physicians from across the enterprise, the Clinical Resource Unit staff, Legal Department, Operations, and Quality. The Intracorp Guideline Quality Committee is similarly staffed by Senior and Associate Disability Medical Directors.

Revisions are suggested and considered. A vote is taken for acceptance or denial of the CRT.

## RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

## COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

## METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups  
Internal Peer Review

## DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

#### Diagnostic Confirmation

#### Subjective Findings

- Hoarseness of voice

- Pain
  - Sore throat, pain on swallowing
  - Referred earache pain
- Cough
- Swallowing difficulty, with or without aspiration

### Objective Findings

- Hemoptysis
- Stridor
- Intrinsic laryngeal mass or positive biopsy
  - Via laryngoscopy (endoscopic evaluation)
- Neck mass or significantly palpable neck nodes
- Abnormal barium swallow
- Mass seen on computerized tomography (CT) or magnetic resonance imaging (MRI)

### Diagnostic Tests

The following tests may be used to discover and evaluate tumors of head and neck that invade the larynx as well as cancers of the oropharynx, oral cavity, and hypopharynx and/or cervical esophagus including variant, verrucous (wart-like) cancers, or involvement of thyroid gland, vocal cords, or neck lymph nodes. See the related Intracorp guideline Oropharyngeal Cancer.

- Laryngoscopy, direct
  - Direct examination under general anesthesia is the primary method of larynx evaluation and is used to visually determine tumor extent and to obtain biopsies, especially if lesions are submucosal.
  - Biopsy is absolutely necessary prior to specific therapy initiation.
- Laryngoscopy, indirect, "office laryngoscopy"
  - The most prevalent initial diagnostic procedure involves indirect examination using mirrors without the need for anesthesia.
  - While fiberoptic nasopharyngoscopy permits visualization of the endolaryngeal region, laryngoscopy allows visualization of submucosal lesions.
- Magnetic resonance imaging (MRI) -OR- computerized tomography (CT), with or without contrast after malignancy diagnosed (See the Intracorp Imaging guidelines)
  - MRI or CT, but not both, may be appropriate to evaluate extent of tumor and metastasis.
  - MRI probably reveals more useful information than CT.
  - Dynamic and static imaging provide most complete data; most appropriate for dysphagia of unknown cause
- Radiology
  - "Plain film" x-rays -- head and neck, chest - performed for gross evaluation for tumor extent and/or metastasis.
- Modified barium swallow -- most appropriate for dysphagia of attributable cause.

### Differential Diagnosis

- Laryngitis
- Allergic or non-allergic rhinosinusitis
- Gastroesophageal reflux disease (GERD) [see related Intracorp guideline]
- Benign tumor of neck
- Tracheomalacia
- Vocal chord paralysis:
  - Secondary to neurologic condition, or
  - Entrapment of recurrent laryngeal nerve
- Non-Hodgkin's lymphoma of head or neck
- Esophageal cancer
- Laryngeal sarcoma, papilloma
- Other solid malignancy

## Treatment

### Treatment Options

- Early stage (T1 or T2)
  - Conservative surgery (partial or "voice-sparing" laryngectomy) with neck node dissection
  - Primary radiation therapy
- Intermediate stage (>T2)
  - Primary radiation alone
  - Supraglottic laryngectomy with neck dissection
  - Supraglottic laryngectomy with postoperative radiation therapy
  - Chemotherapy with radiation
- Advanced state
  - Chemotherapy and radiation with total laryngectomy reserved for treatment failure
  - Surgical Care Setting: acute inpatient
  - Radiation and/or Chemotherapy Care Setting: Clinic or free-standing outpatient center; unless acute illness/severe deconditioning warrants acute inpatient, subacute/skilled nursing facility inpatient, or hospice inpatient admission
  - Experimental regimens combining chemotherapy (with or without surgery and radiation) may be option of choice in widespread disease (T4)
    - New chemotherapeutic agents are being developed based on cancer cell deoxyribonucleic acid (DNA)/gene-markers (oncogenes) [see the Intracorp guideline on Chemotherapy]
    - Anticipate better understanding of molecular level causes of cancer
    - Ability to apply molecular technology to screening, staging, and surveillance
    - Development of molecularly-based therapies, including gene-transfer and cell-metabolism pathway interruption
    - Professional and community resources should be consulted to evaluate on-going clinical trials and patient candidacy to participate.

### Duration of Medical Treatment

- Medical - Optimal: 7 day(s), Maximal: 49 day(s)

Additional information regarding primary care visit schedules, referral options, specialty care, and durable medical equipment is provided in the original guideline document.

The original guideline document also provides a list of red flags that may affect disability duration, and return to work goals, including

- After diagnostic laryngoscopy
- After chemotherapy
- After radiation therapy
- After hospitalization for laryngectomy

Note: Some patients with this condition may never return to work.

Case Management Directives (refer to the original guideline document for detailed recommendations)

#### Case Initiation

##### Establish Case

- Document baseline information, history, key physical findings, patient's understanding, and safety factors.
- See Chemotherapy Chart in the original guideline document.
- The American Joint Committee on Cancer encourages use of the "TNM" classification system (T=primary tumor size; N=lymph node involvement; M=metastasis).
- Provide contact information for local and national support groups.

##### Coordinate Care

- Advocate for patient by managing utilization and charges.
- Document treatment plan.

#### Case Management Focus

##### Activity Deficit

- Document patient's degree of literacy (reading and visual capacities), and if challenges exist regarding communication. Voice prosthesis types include esophageal speech, electrolarynx, intra-oral prostheses, tracheoesophageal prosthesis (TEP).
- Evaluate need for speech therapist (ST) 3/week x 6 weeks in clinic or in home setting. ST course may need to be repeated if problems persist.
- Document activity alteration as none, mild, moderate, severe, dependent, or bed-bound (based on most recent performance status) and interventions required.

#### Chemotherapy Intolerance

- Assess status, acute versus chronic, of toxic side effects on rapidly growing tissues, including bone marrow, epithelium, hair, sperm, and document intervention recommended.

#### Hemodynamic Instability

- Document bleeding complications, severity, and intervention recommended.

#### Immune Compromised

- Document establishment of protective isolation measures for a white blood cells count (WBC) less than 1,000/mm<sup>3</sup>, implying dangerous susceptibility to infection.

#### Inadequate Nutrition

- Document the surgery type for need for swallowing and nutritional support.
- Assess ability to resume oral intake (solid or liquid) 10 to 14 days after surgery.
- Document alternative route of nutrition and hydration plus duration for nasogastric (N/G) (or gastric tube) enteral feedings, intravenous (IV) fluids, or total parenteral nutrition (TPN) solutions.
- Advise patient experiencing post-surgical altered sense of taste and smell that the olfactory senses usually accommodate with time.
- Use optimal goal of remaining within 10% of pretreatment weight to document hydration and nutrition deficit as mild, moderate, severe and response needed.

#### Mental and Emotional Alteration

- In studies, patients judged better quality of life to strongly involve pain control, emotional well-being, and lessened depression. Speech preservation is less strongly involved. While speech scores with or without the larynx were similar, organ preservation was significantly preferred to organ removal. See the Intracorp guideline Depression.
- Ensure accurate diagnosis of any change in mental status.
- Document baseline or optimal mental and emotional functioning and their alterations due to cancer presence, comorbidity, surgery, or treatments.
- Assess and respond appropriately to the degree of debility caused by alterations listed in the original guideline document through benefit coordination or community resource activation.

#### Pain Control

- Document optimal pain management by characterizing severity and interventions undertaken to remedy or manage pain.

#### Oncologic Emergencies

- Immediately report to the surgeon or activate emergency medical technician (EMT) system as necessary for airway incompetence; breathing difficulties or

obstruction; bleeding at surgical site or from suctioning (critical: carotid artery rupture); fistula formation; local infection or sepsis.

- Document presence of or developing oncologic emergencies and report to attending physician, surgeon, or activate EMT system as necessary.

#### Radiation Intolerance

- Document presence and severity of radiation side effects.
- Initiate early interventions for complications of radiation therapy.

#### Respiratory Instability

- Expect laryngectomy tube (larger diameter) replacement by tracheostomy tube 3 to 6 weeks after surgery. Tracheostomy tubes (smaller diameter) remain much longer.
- Assess need for humidification of air and oxygen when frequent coughing and ejection of large amounts of mucus.
- Instruct in adequate tracheostoma airway protection from water, hair sprays, or powders by using loose-fitting bib, mask, or hand over opening.
- Document respiratory deficit as mild, moderate, severe, and dependent, and respiratory rehabilitation enhancement measures.

#### Skin Integrity Deficit

- Assess barriers to rehabilitation involving tracheostomy care and interventions required to enhance recuperation, including presence of wound drains, stomal site and tracheostomy tube cleaning and redressing, fistula formation between larynx and skin (unusual but can occur), and need for frequent suctioning.
- Document severity of skin integrity disruption.

#### Terminal Care

- Document optimal comfort measures and palliative care initiatives.

#### Discharge

#### Discharge from Case Management (CM)

- Document return to independence or stabilized functional status and closing conversations with patient, caregiver, physician, pharmacist, and care providers.

#### CLINICAL ALGORITHM(S)

None provided

### EVIDENCE SUPPORTING THE RECOMMENDATIONS

#### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

Appropriate diagnosis, treatment, and management of laryngeal cancer that assist medical management leaders to make appropriate benefit coverage determinations

### POTENTIAL HARMS

#### Adverse Effects of Chemotherapy

- Nausea and vomiting
- Neutropenia
- Blood chemistry abnormalities
- Cardiac toxicities
- Pulmonary toxicities
- Dysmenorrhea
- Chromosomal abnormalities

Refer to the Chemotherapy Chart in the original guideline document for additional information on adverse effects of medications.

#### Adverse Effects and Complications of Radiation Therapy

- Anorexia, dry mouth, loss of taste, nausea and vomiting, diarrhea
- Alopecia, skin reactions
- Bleeding
- Burns
- Fatigue, lethargy
- Anemias, infection
- Cor pulmonale, pericarditis
- Esophagitis
- Myelitis
- Pneumonitis
- Pulmonary fibrosis

## CONTRAINDICATIONS

### CONTRAINDICATIONS

Refer to the Chemotherapy Chart in the original guideline document for contraindications to chemotherapeutic agents.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

## INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

### IOM CARE NEED

Living with Illness

### IOM DOMAIN

Effectiveness

## IDENTIFYING INFORMATION AND AVAILABILITY

### BIBLIOGRAPHIC SOURCE(S)

Laryngeal cancer. Philadelphia (PA): Intracorp; 2005. Various p. [29 references]

### ADAPTATION

Not applicable: The guideline was not adapted from another source.

### DATE RELEASED

1997 (revised 2005)

### GUIDELINE DEVELOPER(S)

Intracorp - Public For Profit Organization

### SOURCE(S) OF FUNDING

Intracorp

### GUIDELINE COMMITTEE

CIGNA Clinical Resources Unit (CRU)  
Intracorp Disability Clinical Advisory Team (DCAT)  
Medical Technology Assessment Committee (MTAC)  
Intracorp Guideline Quality Committee

### COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

#### FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

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#### GUIDELINE AVAILABILITY

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#### AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Policies and procedures. Medical Technology Assessment Committee Review Process. Philadelphia (PA): Intracorp; 2004. 4 p.
- Online guideline user trial. Register for Claims Toolbox access at [www.intracorp.com](http://www.intracorp.com).

Licensing information and pricing: Available from Intracorp, 1601 Chestnut Street, TL-09C, Philadelphia, PA 19192; e-mail: [lbowman@mail.intracorp.com](mailto:lbowman@mail.intracorp.com).

#### PATIENT RESOURCES

None available

#### NGC STATUS

This NGC summary was completed by ECRI on May 25, 2005. This summary was updated by ECRI on August 19, 2005. The updated information was verified by the guideline developer on September 2, 2005.

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